Enos Lane/Stockdale Highway

Enos Lane / Stockdale Highway Bakersfield, CA 93314

Inquiry Number: 3272661.5

March 08, 2012

The EDR Aerial Photo Decade Package



EDR Aerial Photo Decade Package

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Date EDR Searched Historical Sources:

Aerial Photography March 08, 2012

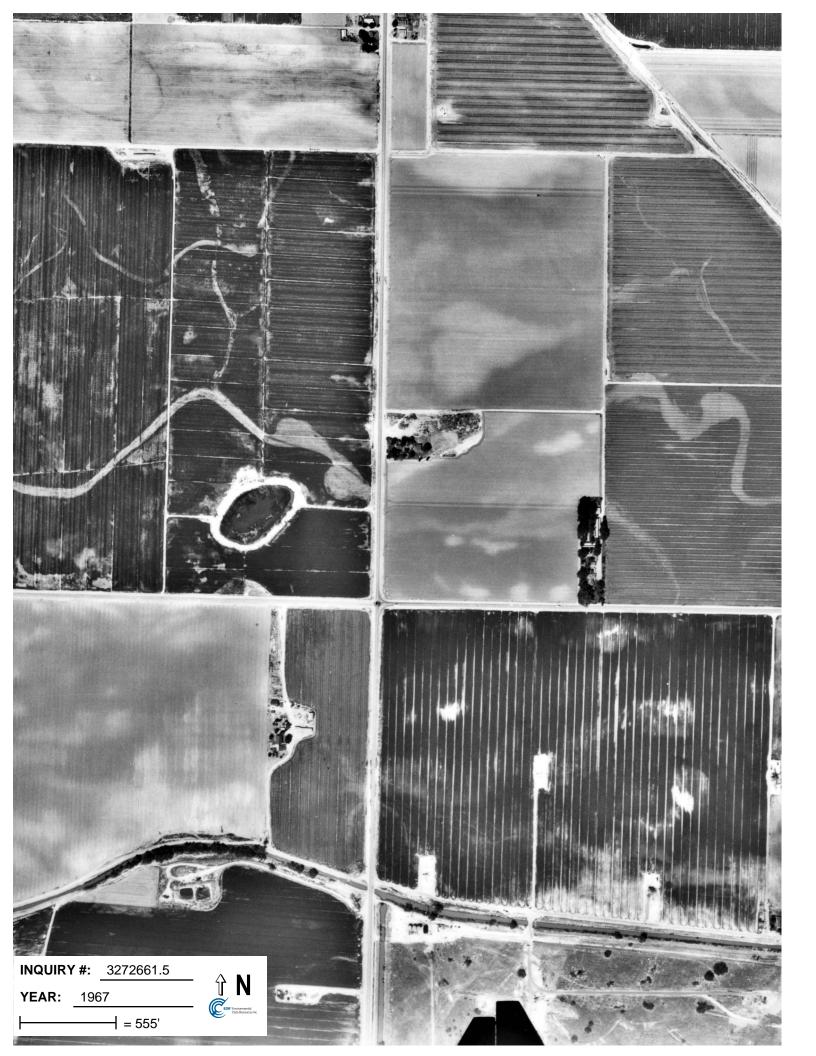
Target Property:

Enos Lane / Stockdale Highway Bakersfield, CA 93314

<u>Year</u>	<u>Scale</u>	<u>Details</u>	<u>Source</u>
1946	Aerial Photograph. Scale: 1"=555'	Flight Year: 1946	Fairchild
1956	Aerial Photograph. Scale: 1"=555'	Flight Year: 1956	Robinson
1967	Aerial Photograph. Scale: 1"=555'	Flight Year: 1967	Western
1974	Aerial Photograph. Scale: 1"=541'	Flight Year: 1974	NASA
1984	Aerial Photograph. Scale: 1"=690'	Flight Year: 1984	USGS
1994	Aerial Photograph. Scale: 1"=500'	/Composite DOQQ - acquisition dates: 1994	EDR
2005	Aerial Photograph. Scale: 1"=500'	Flight Year: 2005	EDR
2006	Aerial Photograph. Scale: 1"=500'	Flight Year: 2006	EDR

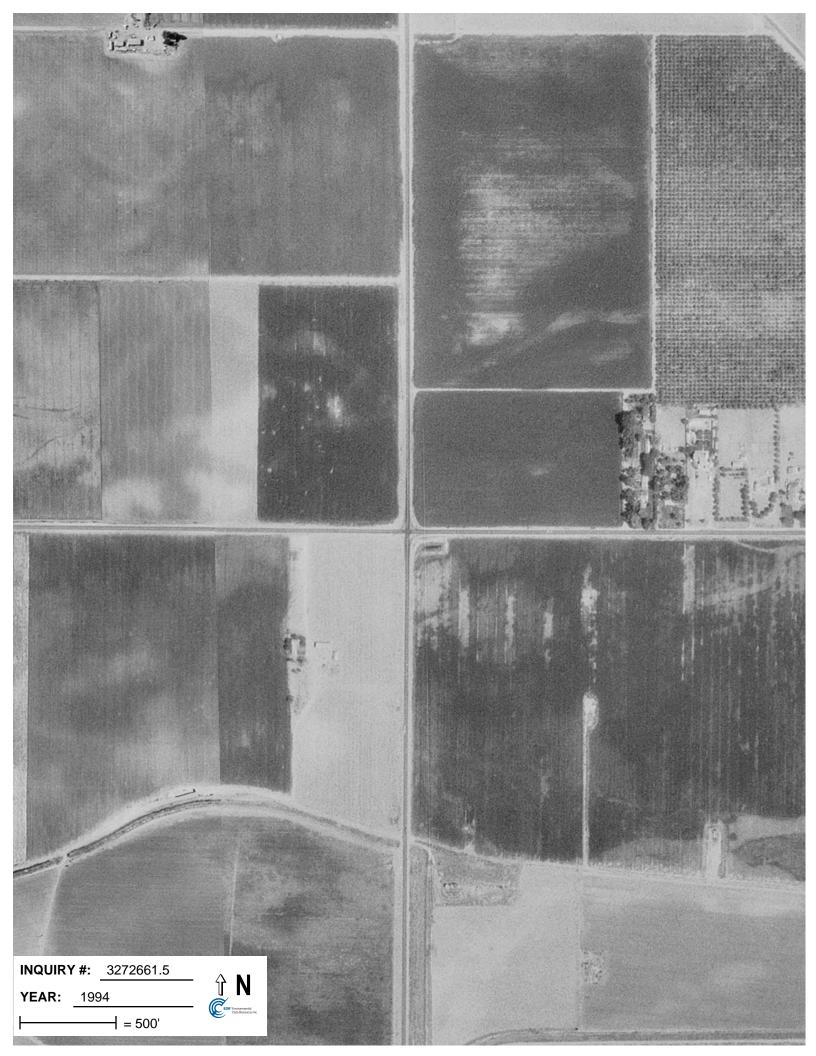




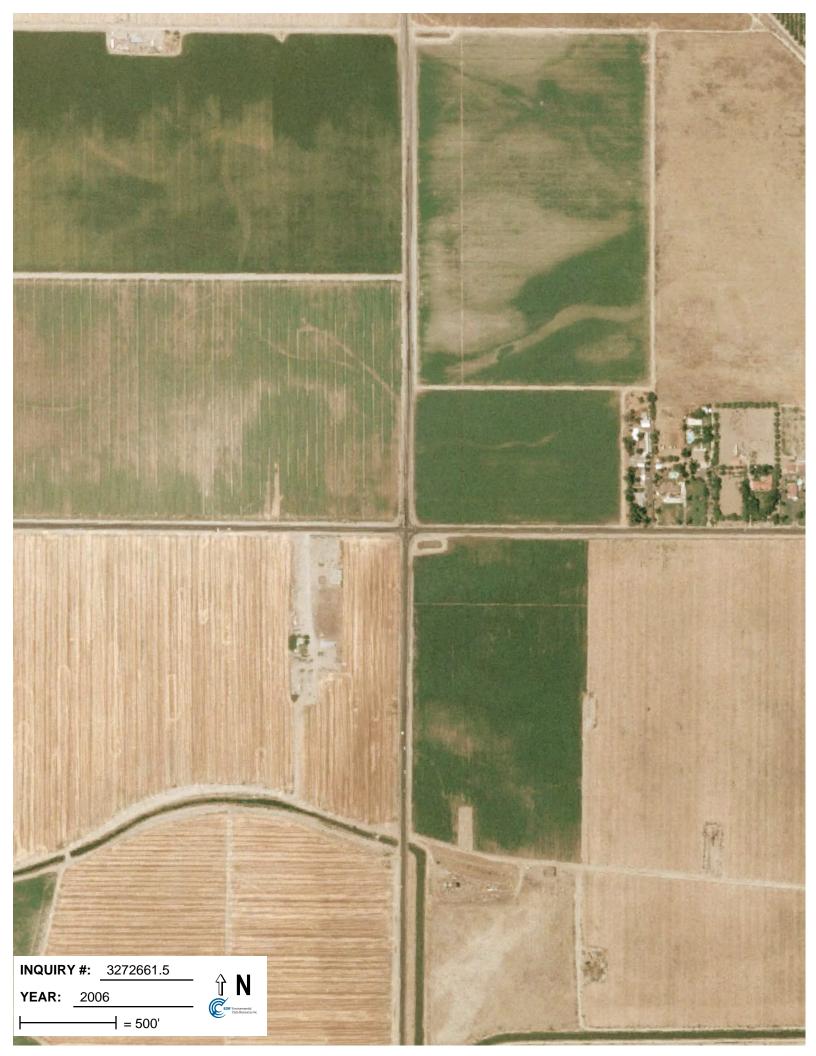












Appendix D Photographs of Study Area Conditions



Photograph: 1 Alternative A – Residential area along Lennox Avenue facing north.

Bakersfield, California



Photograph: 2 Alternative A – Commercial area along Lennox Avenue facing east towards California Avenue.

Centennial Corridor - Segment 1



Photograph: 3 Alternative A – Carrier Canal followed by a residential area facing south.

Bakersfield, California



Photograph: 4 Alternative A – Oil Derrick located within a commercial business park located at California Avenue between Lennox Avenue and Mohawk Street.

Centennial Corridor - Segment 1



Photograph: 5

Alternative A – Commercial area at Village Street and Stockdale Highway facing east.

Bakersfield, California



Photograph: 6

Alternative A – Residential area along Frazier Avenue facing east.

Centennial Corridor - Segment 1



Photograph: 7 Alternative A – 7-11 #17721 located at 3601 Stockdale Highway facing west.

Centennial Corridor - Segment 1

Bakersfield, California



Photograph: 8 Alternatives A, B, and C-Mobil S/S #10-GAZ located at 2 Oak Street.

Centennial Corridor - Segment 1



Photograph: 9 Alternatives A, B, and C – Highway 58 facing west.

Centennial Corridor - Segment 1 Bakersfield, California



Photograph: 10 Alternatives A, B, and C – Highway 99 facing south.

Centennial Corridor - Segment 1 Bakersfield, California



Photograph: 11 Alternatives A, B, and C – Wible Road between Ming Avenue and Belle Terrace Avenue facing north.

Bakersfield, California



Photograph: 12 Alternatives A, B, and C – View of Highway 99 and 58 on ramps off of Wible Road facing north.

Centennial Corridor - Segment 1



Photograph: 13 Alternatives A, B, and C – View of residential areas located adjacent to Highway 58 facing south.

Bakersfield, California



Photograph: 14 Alternatives A, B, and C – Intersection of end of Highway 58 and South Real Road facing west.

Centennial Corridor - Segment 1



Photograph: 15 Alternative C - View of Oak Street facing north.

Bakersfield, California



Photograph: 16 Alternative C - View of residential area along Oakdale Drive facing south.

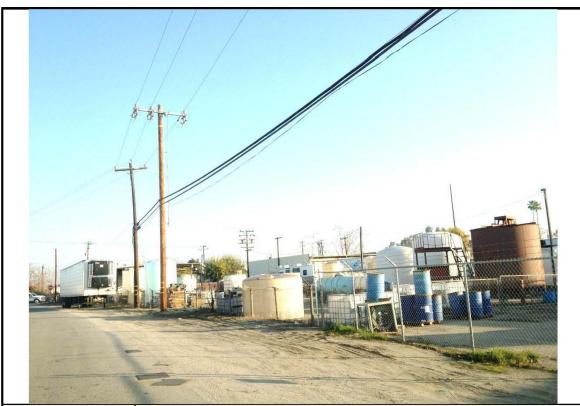
Centennial Corridor - Segment 1



Photograph: 17 Alternative A – View of Kern County Special Waste Facility sign in industrial area adjacent to Highway 99 north of Rosedale Highway.

Centennial Corridor - Segment 1

Bakersfield, California

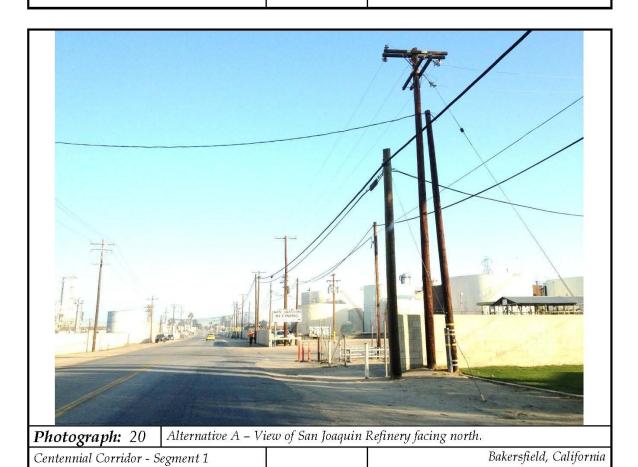


Photograph: 18 Alternative A – General view of light industrial/industrial area located adjacent to the west of Alternative A.

Centennial Corridor - Segment 1



Photograph:19Alternative A - View of 3515 Thomas Avenue and surrounding areas facing east.Centennial Corridor - Segment 1Bakersfield, California





Photograph: 21 Alternative B – View along Stockdale Highway facing east towards Stine Road.

Centennial Corridor - Segment 1

Bakersfield, California



Photograph: 22 Alternative B – Residential area along La Mirada Drive facing north.

Centennial Corridor - Segment 1



Photograph: 23 Alternative B - Commercial area on the western side of Easton Drive.

Bakersfield, California



Photograph: 24 Alternative B – View of Kern Land Tank Farm facing west.

Centennial Corridor - Segment 1



Photograph: 25 Alternatives B and C - View of Kern River facing east.

Centennial Corridor - Segment 1

Bakersfield, California



Photograph: 26 Alternatives B and C – View of the Cross Valley Canal facing east.

Centennial Corridor - Segment 1



Photograph: 27 Alternatives B and C – General view of land use adjacent to Alternatives B and C off of Mohawk Expressway facing east. Note multiple oil derricks.

Bakersfield, California



Photograph: 28 Alternative A – View of Sabre Refinery off of Refinery Avenue facing west.

Centennial Corridor - Segment 1



Photograph: 29 Alternative A – General view of land use adjacent to Alternative A off of Refinery Avenue facing south.

Bakersfield, California



Photograph: 30 Alternatives A, B, and C – General view of land use in the areas north of Truxtun Avenue and west of the Mohawk Expressway, facing west.

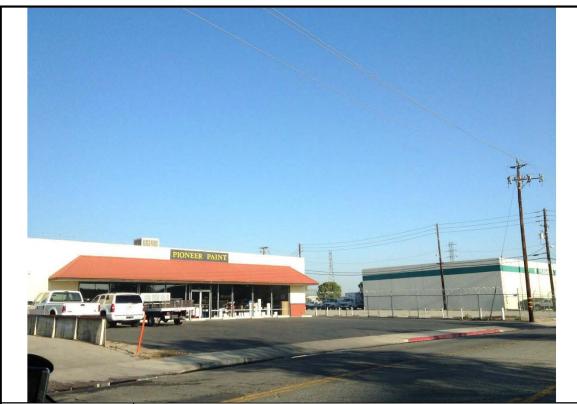
Centennial Corridor - Segment 1



Photograph: 31 Alternative A – Kern River adjacent to the west of the Mohawk Expressway.

Centennial Corridor - Segment 1

Bakersfield, California



Photograph: 32 Alternative C - View of commercial area along Easton Drive.

Centennial Corridor - Segment 1



Photograph: 33 Alternative C – View of commercial area and the BNSF R/R facing north. Note oil tanker cars.

Centennial Corridor - Segment 1

Bakersfield, California



Photograph: 34 Alternative C – View of mixed commercial and land use located at the California Avenue and Easton Drive intersection, facing northwest.

Centennial Corridor - Segment 1



Photograph: 35 Alternative C – View of Mobil and Del Taco located at 3624 California Avenue.

Bakersfield, California



Photograph: 36 Alternative C – View of Saunders Park located adjacent to the west of Highway 99, facing east.

Centennial Corridor - Segment 1

Appendix E Enos Lane/Stockdale Highway ISA Checklist



Initial Site Assessment (ISA) Checklist

Project Information

Enos Lane intersection.

E22			0 2 00 W		
				west along Stockdale Highway from its	
				ing adjacent land to widen the existing	
roac	dways.	2			
Is tl	ne project on the HW Study M	inimal-Risk Proje	ects List (HW1)?	<u>No</u>	
Pro	ject ManagerNA		phone #	NA	
Pro	ject Engineer <u>NA</u>		phone #	NA	
Pr	oject Screening				
Assault	cod at the entry of those for the control of the co	no selecto college el el topoco	of althouseness also various phonons in	C 111	
	ach the project location map t ntified.	o this checklist to	o snow location (of all known and/or potential HW sites	
1	Project Features: New R/W?	Vac Evacyot	ion? Vag Dai	lroad Involvement? No	
1.	2	di-	5 1		
	Structure demolition/modifica	ation? <u>Yes</u> Su	bsurface utility re	elocation? Yes	
2.		lale Highway and	d Enos Lane inte	rsection in the City of Bakersfield and	
Kern County, California.					
	Rural or Urban Rural				
	Current land uses: Highway	with adiacent agr	icultural. resident	ial, and light industrial uses	
	10 - 1 0 - 1 - 1 0 - 1 - 1 0 - 1 - 1 0 - 1	5 5			
	Adjacent land uses: Agricult	ural, residential, a	ınd light industria	<u>l</u>	
3. Check federal, State, and local environmental and health regulatory agency records as necessary					
	if any known hazardous waste site is in or near the project area. If a known site is identified, show its location on the attached map and attach additional sheets, as needed, to provide pertinent information				
	for the proposed project. See				
4	Conduct Field Inspection	Date: NA See F	Figure 5 for the lo	cation of potential or known hazardous	
37.5	waste sites.	<u> </u>	igare 3 for the re	canon or possiniar or mio in madar would	
	STORAGE STRUCTURES /	Pipelines:			
	Underground tanks: Non		Surface tanks	: None Observed	
	Sumps: None Observed		Ponds: None	NAME OF THE PARTY	
	Drums: None Observed		Basins: None		
	Transformers: None Obs	<u>erved</u>	Landfill: No:	ne Observed	

Other Oil, gas, and geothermal resources (five active oil wells, one dry hole, and one active injector well) located on adjacent properties located to the southeast of the Stockdale Highway and

Initial Site Assessment (ISA) Checklist

(continued)

CONTAMINATION: (spills, leaks, illeg	CONTAMINATION: (spills, leaks, illegal dumping, etc.)				
Surface staining: No	Surface staining: No Oil sheen: No				
Odors: No	Vegetation damage: No				
	Other: <u>Suspected contamination from oil pumping activities at adjacent properties to the southeast of the Stockdale Highway and Enos Lane intersection.</u>				
<u>HAZARDOUS MATERIALS:</u> (asbestos, within the final project footprint.	<u>HAZARDOUS MATERIALS:</u> (asbestos, lead, etc.): <u>No buildings inspected- unknown if any will be within the final project footprint.</u>				
Buildings: NA	Spray-on fireproofing:	NA			
Pipe wrap: NA	Friable tile:	NA			
Acoustical plaster: NA	Serpentine:	NA			
PaintNA	Other:	NA			
 Additional record search, as necessary, of subsequent land uses that could have resulted in a hazardous waste site. See Figure 5 for the location of potential or known hazardous waste sites. Other comments and/or observations: As in the case for any project that involves excavation, there is a potential for unknown hazardous contamination to be encountered during project construction. For unknown hazardous waste/material encountered during proposed project construction, the procedures outlined in a Health and Safety Workplan shall be adhered to. 					
ISA Determination					
Does the project have potential hazardous waste involvement? Yes If there is known or potential hazardous waste involvement, is additional ISA work needed before task orders can be prepared for the Investigation? Yes If "YES," explain; then give an estimate of additional time required: Historic oil field activities in the surrounding areas of the project area may have resulted in residual soil contamination. Soil sampling should be conducted once the selected alternative route is selected to determine any residual impacts.					
A brief memo should be prepared to transmit the ISA conclusions to the Project Manager and Project Engineer.					
ISA Conducted byERM-	West, Inc. Date	3/12/2012			

Appendix F Professional Profiles

John O. Cavanaugh, P.G.

Partne





Mr. John Cavanaugh is a Partner with ERM based in Walnut Creek, California. He has 15 years of experience in the environmental consulting industry for various private and public sectors, particularly transportation, oil and gas, and semiconductor. He has managed several multiyear, multimillion-dollar remedial efforts performed in conjunction with large civil and linear infrastructure construction projects. His expertise includes design and implementation of remedial strategies, agency negotiation, and waste minimization/ management. He has effected prompt resolution of environmental concerns, such as unknown contaminants, underground storage tanks (USTs), and health and safety issues, as encountered during construction. As a result, he has developed solid, productive working relationships with many local regulators, including the California Department of Toxic Substances Control (DTSC) and various Regional Water Quality Control Boards (RWQCB). He has been successful in negotiating remedial strategies with local regulators that greatly facilitated project development by creating flexibility and cost-saving remedial alternatives.

Mr. Cavanaugh specializes in developing waste management and reuse/disposal strategies for soil and groundwater either generated by construction activities or encountered in properties subjected to construction. He has been particularly successful in the development and implementation of soil management plans and disposal of treated groundwater during several construction projects in the Bay Area, which resulted in substantial savings in disposal costs for the clients. He has worked with several chemicals of concern, including TPH (i.e., gasoline, diesel, motor oil, and Bunker-C oil), solvents, PAHs, pesticides, and metals (predominantly lead and arsenic).

Mr. Cavanaugh has provided oversight and technical specifications for the construction of soil vapor extraction, air sparge, dual-phase, and groundwater extraction wells. Finally, Mr. Cavanaugh has managed multiple-phase subsurface investigations associated with USTs at 60 sites in Northern California, Washington, and Oregon.

Professional Affiliations & Registrations

- Professional Geologist, California (#6515)
- Association of Engineering Geologists

Fields of Competence

- Soil and groundwater waste management programs
- Regulatory strategies and strategic remediation planning
- Soil and groundwater investigation
- · Regulatory agency negotiation
- UST removal and site restoration
- Hazardous waste management
- · Construction management
- · Waste minimization

Education

- B.S., Geological Sciences, California State University, Hayward, 1989
- 40-Hour OSHA Hazardous Waste Operations and Emergency Response, 1990
- Annual 8-Hour Hazardous Waste Operations Refresher Training, 2004



Delivering sustainable solutions in a more competitive world

Directed 5-year, on-call contract for Bay Area Rapid Transit (BART) light-commuter rail system in San Francisco Bay Area. To date, directed four task orders related to construction of transportation facilities in areas with impacted soil and groundwater. Performed Phase I environmental site assessments related to property acquisition and Phase II site investigations to determine material management and worker health and safety options. Provided assistance in storm water management and procurement support. Projects have included Warm Springs Extension and Oakland Airport Connector.

Managed remediation of 7.5-mile corridor transferred to BART as part of San Francisco International Airport extension project. Developed soil management plan with BART to appropriately characterize impacted material, establish background value for arsenic allowing reclassification of soil as nonimpacted, and to establish criteria for on-project reuse of impacted material. Negotiated with DTSC to obtain variance regarding transport and storage of waste during project. Efforts reduced volume of impacted soil by 50,000 tons, saving client nearly \$2 million in contractor costs to excavate, transport, and dispose of material. On-project reuse of remaining impacted material saved additional \$1.5 million.

Directed 5-year, on-call contract for Peninsula Corridor Joint Powers Board (Caltrain, local commuter rail line). Managed 22 task orders in San Francisco Bay Area, many related to construction of transportation facilities in areas with impacted soil and groundwater. Performed Phase I environmental site assessments and Phase II site investigations to determine material management and worker health and safety options; activities included agency negotiation, procurement support, and construction management support. Performed predemolition asbestos and lead-based paint surveys on structures at several sites; often included inventory/ testing of residual and bulk stored materials (i.e., fuels, paints, and solvents), and identification of PCBcontaining equipment. Projects have included North and South CTX, Diridon Station Retrofit, Hayward Park Station, System-wide Storm Water Evaluation, and CEMOF Facility Design Support.

Developed and implemented soils management program to ensure accurate identification of impacted materials for major railroad as part of politically sensitive Interstate 880 reconstruction project in San Francisco Bay Area. Negotiated with California Department of Transportation (Caltrans) and DTSC to establish cleanup/reuse criteria. Through cooperative interaction with Caltrans, facilitated appropriate project reuse or disposal of more than 200,000 cubic yards of excavated material. Outcome resulted in savings of approximately \$8 million.

Managed four tasks orders for Caltrans involving site investigation. Developed and implemented soil and groundwater investigation workplans, health and safety plans, and feasibility studies. Characterized soil prior to procurement and construction of I-80 HOV fly-over, developed remedial action options evaluation for two legacy properties, and characterized soils during development of extensive median/parkway (Mandela Parkway).

Negotiated Voluntary Cleanup Agreement and Removal Action Work Plan with DTSC to govern development of new rail maintenance facility in former rail yard in Oakland, California. Approved RAW established framework for remedial actions, including soil reuse, and allowed project development to occur in conjunction with remedial actions.

Negotiated soil management plan with DTSC and RWQCB to govern handling, reuse, and disposal of 100,000 cubic yards of soil excavated during reconstruction of several segments of 40-mile right-of-way transecting three counties and 15 cities. Approved plan allowed considerable flexibility regarding changes in design and allowed for reuse of material that, if considered waste, would meet regulatory definition of hazardous waste. Reuse of impacted soil resulted in project saving of approximately \$3 to 5 million.

Provided environmental support to major railroad during negotiations regarding sale of impacted land to local surface water authority to facilitate flood control project. Successful negotiations allowed railroad to obtain full market value for land, receiving majority of payment up front with greatly reduced environmental holdback account.

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Directed implementation of Remedial Action Plan to address impacted soil and groundwater encountered during construction of Amtrak maintenance facility. Obtained permit to treat and discharge groundwater impacted with BTEX and diesel. Directed installation and operation of treatment system, installation of containment cap, and excavation/disposal of impacted soil. Performed work in accordance with strict erosion control and security measures necessitated by proximity of site to sensitive residential neighborhood.

Managed or directed remedial activities at 15 UST support or maintenance facility sites for major national railroad. Provided direction and worked as part of multidisciplinary teams to implement remediation technologies, including capping, excavation, pump and treat, air sparge/dual-phase extraction, and enhanced bioremediation. Included significant on-site involvement to ensure activities were compliant with federal, state, local, and client requirements for health and safety; and emissions, noise, and Caltrans Statewide Storm Water Permit requirements. Sites include San Francisco Bay Area, as well as Tracy, Alturas, Norden, and Grass Lake, California.

Managed environmental concerns related to redevelopment of active 70-acre intermodal facility on reclaimed land owned by major railroad. Developed and implemented soil management, groundwater management, and air monitoring programs designed to reduce client's cost and liability while expediting project specifications and progress.

Provided evaluation and expertise to insurance carrier regarding environmental liabilities of refinery involved in divestiture.

Obtained "contained out" ruling from DTSC for pesticide-impacted soil at site of former agricultural products facility near politically sensitive residential park. Ruling allowed client and future property owner to manage soil previously classified as RCRA hazardous waste as nonhazardous waste.

Performed large-scale (16,000 cubic yards) remedial investigation at former auto import facility situated on Oakland Army Base. Work was performed in cooperation with the Army to restore the site to the prelease condition, facilitating economic development.

Provided field supervision during multi-year rail yard relocation resulting from freeway construction project. Included demolition of environmentally sensitive structures (tanks, sumps, oil pipeline, and industrial waste facilities) and remediation of impacted soil and groundwater without delaying construction activities.

Conducted soil and groundwater remediation projects in California, Washington, and Oregon. Worked with client, regulator, and project team to develop and implement remedial strategies, including conventional pump and treat, soil vapor extraction, air sparging, dual-phase extraction, and soil excavation.

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John C. Moe, P.E.





Mr. John Moe has 31 years of experience performing and managing environmental engineering consulting, assessment, and remediation activities in California. During his career, he has worked as a regulator, an inhouse environmental manager for a large transportation company, and an environmental consultant. His expertise includes contract and subcontract negotiations; direction of investigations and remedial activities in support of real estate transactions; management of large, complex environmental investigations; quick response to hazardous material release incidents; compliance with regulatory orders and agreements; and development of multiple potentially responsible party cost allocation models.

Mr. Moe has worked on over 150 transportation-related projects while with two major railroad companies, and in his current role as Program Director for ERM's environmental investigation and remediation contract with one of these railroad companies. He has extensive expertise in interacting and negotiating with the San Francisco Bay, Los Angeles, Central Valley and North Coast Regional Water Quality Control Boards (RWQCB), California Department of Toxic Substances Control (DTSC), and various local agencies.

Mr. Moe has managed investigations of soil and groundwater impact from petroleum hydrocarbons, halo genated organic compounds, metals (especially lead and arsenic), PCBs, polynuclear aromatic hydrocarbons, and asbestos. He has directed health risk assessments, contaminant migration modeling, and evaluation of remediation alternatives.

Professional Affiliations & Registrations

 Registered Professional Engineer, California (#C52603)

Fields of Competence

- Project management
- Environmental liability cost evaluations
- Environmental site assessments in support of mergers and acquisitions
- · Groundwater monitoring programs
- Multi-party liability allocation evaluations
- Litigation support
- · Environmental program management

Education

- M.S., Environmental Management, University of San Francisco, 1982
- B.A., Biology, University of California, 1972
- Annual 8-Hour Hazardous Waste Operations Refresher Training, 2003
- A.H.E.R.A. Asbestos Maintenance Worker, 2002
- Tank Car Safety Course, Transportation Technology Center, 1998
- 40-Hour OSHA Hazardous Waste Operations and Emergency Response, 1980

Languages

English, native speaker

Key Industry Sectors

- Government
- Transportation



San Francisco – Oakland Bridge Toll Collection Administration Build Design Project, Bay Area Toll Authority, San Francisco and Alameda Counties. Hazardous Materials Project Manager

Directed pre-design evaluation of hazardous materials issues for new administration building at the Bay Bridge toll plaza. Evaluated soil, groundwater and hazardous building materials. Coordinated with the design team to incorporate findings into 45% design documents and will provide input to design team on hazardous materials issues through final design.

Rosedale Highway Widening Design Project, Thomas Road Improvement Project, Bakersfield, CA. Hazardous Materials Project Manager

Directed design and performance of aerially deposited lead (ADL) study and ISA for the approximately 12 mile long linear corridor project footprint. ISA will be used to evaluate impacts of hazardous materials for the environmental document and preliminary and final design of the highway widening project.

Site Investigation and Remediation Program, Confidential Transportation Client, California, Nevada, and Arizona. Program Manager

Oversaw scoping, budgeting, and implementation of initial site assessments, site investigations, remedial action option evaluations, and remediation implementation. Had primary responsibility to ensure that project objectives were met, monitored schedule and budget progress and compliance with all health and safety requirements, and served as primary contact with client's project managers.

San Francisco International Airport BART Expansion, BART, San Francisco Bay Area. Remedial Project Manager

Project included remediation and sale of 7.5-mile corridor. Developed soil management plan with BART to characterize impacted material, establish background levels for arsenic allowing reclassification of soil as non-impacted, and establish criteria for on-project reuse of impacted material. Negotiated with DTSC to obtain variance for transport and storage of waste during project. Efforts reduced volume of impacted soil by 50,000 tons, saving railroad substantial contractor costs in excavating, transporting, and disposing of material. On-project reuse of remaining impacted material saved additional substantial amount.

Site Investigation and Remediation Program, Confidential Transportation Client, Eureka, California. Remedial Project Manager

Directed extensive initial site assessment and four rounds of soil, groundwater, and surface water investigations. Prepared Coastal Development Permit with City of Eureka, including historical significance study, and directed removal of numerous structures following asbestos and lead-based paint surveys. Negotiated with North Coast RWQCB to conduct limited removal of lead-impacted soil based on statistical evaluation of total and soluble lead concentrations and in accordance with historical groundwater data indicating no significant metals impacts. Procured mobile laboratory and contractors to perform excavation. Arranged for proper transport and disposal of hazardous waste soils.

"On-Call" Environmental/Hazardous Materials Engineering Services Contracts, Caltrain, San Francisco Bay Area. Task Manager

Managed numerous projects during a 5-year, on-call contract for Peninsula Corridor Joint Powers Board (Caltrain, local commuter rail line), providing environmental/hazardous materials engineering services related to JPB and third-party projects on Caltrain's right-of-way. Acted as task manager on North and South CTX track expansion/rehabilitation, Diridon Station investigation, Linden Street grade separation, San Francisco Yard retrofit, and CEMOF Facility Design and Construction Support.

Caltrans San Bruno Station, Samtrans, San Bruno, California. Project Manager

Managed pre-design investigation of soil, groundwater and hazardous building materials. Project included supplementing existing data with additional sampling of all media. Formulated a known environmental conditions report documenting findings. Coordinated with the design team to incorporate hazardous materials findings into construction bid specifications. Oversaw and monitored effectiveness of pre-demolition hazardous materials abatement, directed proper stockpiling, sampling and disposition of excavated soil, and review site specific work plans for all hazardous materials related activities at the site.

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South San Francisco Station, Samtrans, So San Francisco, California. Project Manager

Managed pre-design investigation of soil and groundwater for planned new passenger rail station at South San Francisco. Formulated a known environmental conditions report. Advised design team on hazardous materials issues including: stockpiling, characterizing and disposition of over 12,000 yards of excess soil; requirements for treatment and handling of potentially impacted groundwater encountered during construction of a pedestrian tunnel; assessment of hazardous building materials in a building to be demolished as part of the project; formulation of sections of bid documents related to hazardous materials.

Site Assessment of Former Railroad Operating Facility, Confidential Client, Healdsburg, California. Remedial Project Manager

Soil sampling indicated arsenic and lead impacts on property. Designed remediation program using XRF to analyze soil samples in field to determine extent of soil requiring excavation to meet remedial action objectives (RAOs). Program effectively limited volume of soil removal to meet RAOs, and eliminated need for additional mobilization of the excavation contractor to site. Negotiated No Further Action determination with North Coast RWQCB.

Roseville Yard Site, Confidential Client, Roseville, California. Project Manager

Managed RI/FS/RAP program 640-acre state Superfund site. Work involved extensive historical record review, surface and subsurface soil sampling, groundwater investigation via direct-push methods and monitoring well installation, assessment of presence of unexploded ordnance, soil gas surveys, geophysical surveys, off-site source search and assessment, free product removal, soil excavation, and bioremediation. Negotiated remedial action objectives and methods at multiple operable units. Designed site investigation and interim remediation program that would minimize disruption of operations at active yard. During reconstruction of major portion of yard, negotiated innovative soil management process with DTSC and RWQCB to allow cleanup and construction to proceed concurrently, which resulted in economical remediation that did not disrupt construction and will lead to regulatory closure for 50% of site without requiring formal site investigation or remedial action options/feasibility study report.

Puente Valley NPL Site, Confidential Client, San Fernando Valley, California. Project Manager

Represented major railroad in regional groundwater USEPA Superfund site. Served on PRP technical committee, which was successful in reducing number of groundwater extraction wells from 12 to six, resulting in substantial savings in remedy implementation. Assisted in formulating method of allocation utilizing site size, duration of operation, chemical usage, and degree of impact to regional groundwater that was subsequently used by the PRP group to allocate responsibility and was major factor in mediated settlement in PRP group.

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Anna Ku Morgan





Ms. Anna Ku Morgan is a Senior Project Manager located in ERM's Walnut Creek, CA office and has 15 years of experience in the field of environmental science and engineering. Ms. Morgan has conducted Phase I environmental assessments, compliance auditing, site investigation and remediation, human health risk assessments, and program management for industrial and commercial facilities located throughout the United States and Western Canada.

Ms. Morgan has conducted over 300 Phase I environmental assessments which are compiled from site visits, personnel interviews, research of various agency records and historical documents. She has expertise in review of aerial photos, topographic maps, Sanborn Fire Insurance Maps, and agency record search reports that have allowed her to complete Phase I reports for each site. Ms. Morgan has also managed mergers & acquisitions portfolios ranging from 5 to 25 sites in the United States and internationally. Clients include industry, consultants, attorneys, brokers, developers, and governmental agencies.

Ms. Morgan has managed, planned, coordinated, and conducted various site characterization and field investigations involving impacted soil, groundwater, sediment, surface water, soil vapor, and asbestoscontaining materials. She directed subsurface investigations, geophysical surveys, excavation activities, installation and decommissioning of monitoring wells, and large scale monitoring programs.

Ms. Morgan's complex skill set includes environmental, health, and safety compliance auditing, human health risk assessments, Title V air permitting, and vapor intrusion modeling, and groundwater chemical transport modeling experience.

Professional Affiliations & Registrations

 Cal/EPA DTSC Registered Environmental Assessor I (No. 08169)

Fields of Competence

- Phase I & Phase II Environmental Site Assessments
- · Regulatory compliance
- Site characterization and remediation
- · Human health risk assessment
- · Ground water monitoring & remediation
- Aquifer testing and analysis
- · Asbestos surveys and sampling programs
- Vapor intrusion & groundwater chemical transport modeling

Education

- M.S., Environmental Engineering, University of California, Irvine, 2002
- B.A., Environmental Science, Minor in Forestry and Resource Management, University of California, Berkeley, 1997
- OSHA 40-Hour HAZWOPER

Languages

- English, native speaker
- Chinese (Mandarin & Cantonese), passable

Key Industry Sectors

- Manufacturing
- Biotechnology
- Hi-Tech & Telecommunications
- · Real Estate, Redevelopment
- Commercial and Residential Properties
- Government
- Shipyards
- Ski Resorts



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Environmental Site Assessments

Alexandria Real Estate Equities, Inc., California
Conducted Phase I and Phase II Environmental Site
Assessments (ESAs), tenant exit reviews, limited
regulatory compliance reviews, and asbestos surveys of
various biotechnology facilities, pharmaceutical facilities,
laboratories, warehouses, and commercial buildings in
the San Francisco Bay Area. Conducted extensive site
history research and communications with regulatory
personnel, extensive soil, soil gas, and groundwater
investigation. Provided recommendations for
remediation and asbestos abatement.

Avery Dennision Corporation, Various Countries Assisted with program management and provided quality control of Phase I and Phase II reports to ensure consistency of deliverables. Prepared proposal and scope of work for additional Phase II investigations for various sites in the Americas, Europe, and Asia-Pacific.

California High Speed Train – San Francisco to San Jose Section and San Jose to Merced Section, California Project Manager for hazardous materials and environmental site assessments of a 50-mile north-south trending corridor proposed to be constructed in San Francisco, San Mateo, and Santa Clara Counties a 125-mile east-west trending corridor proposed to be constructed in Santa Clara, Merced, and Madera Counties as part of the California High Speed Train Project. The project involved review, analysis and compilation environmental information. Produced a comprehensive environmental report that identified areas of potential hazardous impact and provided recommendations for mitigation.

Centennial Corridor, California Department of Transportation, Bakersfield & Kern County, California Conducted a hazardous materials and environmental site assessment for a 12-mile east-west trending corridor proposed to be constructed in Kern County to connect Interstate 5 with Highway 99 through the City of Bakersfield. Identified areas of potential hazardous material impact and provided recommendations for mitigation.

Centex Homes, Northern California

Project Manager and conducted numerous Phase I and Phase II ESAs on developed and undeveloped properties

throughout Northern California. Prepared proposals, scope of work, and budget estimates to the client; Scheduled subcontractors and prepared subcontract agreements for underground utilities clearance, soil gas surveys, soil and groundwater sampling, concrete coring, and laboratory analyses; Conducted/oversaw field investigations; Analyzed and interpreted laboratory data of soil, soil gas, and groundwater samples; Provided oral reports during conference calls with the client; and prepared reports of findings and recommendations. Managed staff, assigned project work and provided quality control to ensure consistency of deliverables. Work was done under tight time constraints to meet client deadlines and under budget with high quality deliverables.

Doane Pet Care, Missouri, Kansas, and Oklahoma Conducted Phase I ESAs and limited regulatory compliance reviews of pet food manufacturing facilities and associate plant equipment engineering and fabrication facilities located in Missouri, Kansas, and Oklahoma.

Orient Overseas (International) Limited, British Columbia

Conducted Phase I ESAs and limited regulatory compliance reviews of the Terminal Systems, Inc. and Deltaport container handling terminals in Vancouver and Delta, British Columbia.

Sacramento River Deep Water Shipping Channel, United States Army Corps of Engineers, Contra Costa, Sacramento, Solano, and Yolo Counties, California Project Manager for a Phase I ESA records review of a 46.5 mile-long shipping channel spanning four counties in California. Managed staff, assigned project work, identified properties of potential environmental concern along the shipping channel, and provided recommendations for additional investigation.

Schreiner Canada, Ltd., Medicine Hat, Alberta

Conducted Phase I and Phase II ESAs for a company that designs and manufactures remote control vehicles, such as small aircrafts, ground vehicles, and boats used as shooting targets. The Phase I involved extensive historical land use research and regulatory agency file reviews to identify soil and groundwater contamination on site from a neighboring facility. The Phase II identified the extent of the contamination. The results of this project were used to negotiate indemnity in an acquisition transaction.

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Ski Resorts, California and British Columbia
Conducted Phase I ESAs and limited regulatory
compliance reviews of various ski resorts including
Squaw Valley, Sierra-at-Tahoe, and Northstar in
California, and Panorama Mountain Village in British
Columbia. Also conducted Phase I ESAs on a helicopter
skiing company and a resort village in British Columbia.

Vigor and Todd Shipyards, Oregon and Washington Worked with a team of assessors to identify environmental issues and risks at several shipyards and marine repair facilities in the Pacific Northwest and California. Project objective also involve cost estimates to address the environmental issues identified at the shipyards and repair facilities.

Wastequip, Oregon and Washington Conducted Phase I ESAs and limited regulatory compliance reviews of various trash dumpster fabrication facilities. Provided recommendations to assist with regulatory compliance.

Western Digital, Fremont, California Conducted Phase I ESA and limited regulatory compliance review of a hard drive manufacturing facility.

Wineries, Sonoma and Napa Counties, California Project Manager and conducted Phase I ESAs and limited regulatory compliance reviews of various wineries in Northern California. Wineries included the Francis Coppola Winery in Geyserville, the Buena Vista Winery and Vineyards in Sonoma, the Gary Farrell Winery in Healdsburg, and the Geyser Peak Winery in Geyserville. Provided reliance letters and recommendations to assist with regulatory compliance and additional site investigation.

Compliance

Cisco Systems, Inc., San Jose, California Conducted comprehensive environmental compliance audits in over 50 buildings at the Cisco Campus in San Jose and Milpitas.

Genentech, South San Francisco, California Developed over 50 HMBPs for each building on the Genentech campus located in South San Francisco. The HMBPs entailed characterization and evaluation of chemicals used and stored at the exterior of each building. The HMBPs also included detailed contingency plans and emergency evacuation plans.

General Dynamics Ordnance and Tactical Systems, Healdsburg, California

Conducted an environmental, health, and safety compliance audit at a control actuator systems manufacturing facility. Provided a detailed report of findings, best management practices, and recommendations to assist with regulatory compliance.

Hexion Specialty Chemicals, Fremont, California Conducted hazardous waste determination of waste streams generated at an urea- and phenol-resin chemical production facility. The hazardous waste determination results were used to assist the facility in obtaining the proper hazardous waste treatment permit.

Jennings Technology, San Jose, California Conducted a hazardous waste compliance audit at a capacitors, relays, interruptors, contactors, and coaxial relays manufacturing facility. Provided a detailed report of findings, best management practices, and recommendations to assist with regulatory compliance.

Syngenta Seeds, Inc., North America

Project Manager and conducted environmental, health, and safety compliance audit for over 40 seed production and processing facilities in the United States, Canada, and Puerto Rico. Provided detailed reports of findings and recommendations to assist with regulatory compliance. Worked with project staff to ensure high quality and consistency of deliverables. Provided additional value-added support to assist client in implementing remedial actions.

Syngenta Seeds, Inc., Gilroy, California

Project Manager in assisting the facility to comply with regulatory inspection citations. Conducted hazardous waste determination of all waste streams generated at the facility. Project Manager for development of a Hazardous Materials Business Plan (HMBP) for the facility. Prepared a facility closure plan, conducted closure activities, and prepared a closure report. Interfaced with regulatory personnel to work towards facility closure.

Site Characterization

Companies Confidential, Michigan and New Jersey Assisted in large-scale dioxin studies. The projects involved dioxin contamination in soil and sediment.

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Worked extensively with laboratory data and data management; assisted with sampling; and prepared sediment remediation/investigation reports and feasibility studies.

Former Whittaker-Bermite Facility, Santa Clarita, California

Coordinated large-scale quarterly groundwater monitoring events. Organized sampling schedules, field activities, and laboratory analytical methods. Trained new personnel to perform sampling. Conducted groundwater sampling activities, and prepared groundwater monitoring reports.

Heritage Square (Former Westinghouse Site), Emeryville, California

Project Manager and conducted site characterization of polychlorinated biphenyls- (PCBs-) impacted soil of a former transformer manufacturing facility. Prepared site remediation plans for the removal of PCB-impacted soils.

Hollinee Filtration, Mexia and Groesbeck, Texas Conducted soil and groundwater sampling at two Hollinee facilities. Oversaw geophysical surveys to located buried wastes. Oversaw backhoe excavation to determine the extent of buried wastes. Prepared findings report and recommendations of remedial activities.

Remediation/Modeling/Site Closure

Company Confidential, Vallejo, California

Conducted transport modeling for the movement of gasoline constituents in impacted groundwater for a site in Vallejo, California. Also projected the natural attenuation with phytoremediation of the contaminants over a period of 20 years. Prepared closure report and worked with regulatory agency personnel to obtain site closure.

Glovatorium, Oakland, California

Conducted transport modeling for the movement of tetrachloroethene and trichloroethene in impacted groundwater for a site that was impacted with chlorinated solvents. Also projected the natural attenuation of the contaminants and their degradation products over a period of 20 years. Prepared closure report and worked with regulatory agency personnel to obtain site closure.

Mission Valley Terminal, San Diego, California Conducted vapor intrusion modeling to determine riskbased target concentrations of gasoline constituents. The modeling results were used in a human health risk assessment for the site.

Former Montgomery Ward Site, Pleasant Hill, California

Conducted vapor intrusion modeling to determine riskbased target concentrations of gasoline constituents. The modeling results were used in a human health risk assessment for the site. Also assisted in facility decommission activities (soil and groundwater sampling, impacted soil excavation and disposal, and confirmatory soil sampling).

Reynolds Systems, Inc., Middletown, California Conducted site investigation of explosives-impacted soil and groundwater. Conducted extensive soil excavation. Prepared closure report and worked with regulatory agency personnel to obtain site closure.

Publications

- Ku, A., O. Ogunseitan, J. Saphores, A. Shapiro and J. Schoenung (2003). "Lead-free solders: Issues of toxicity, availability and impacts of extraction," accepted for presentation at Interconnections Subcommittee Session, the 53rd Electronic Components and Technology Conference, May 27-30, 2003, New Orleans, Louisiana USA.
- Downing, J.B., E. Bracco, F.B. Green, A.Y. Ku, T.J. Lundquist, I.X. Zubieta, and W.J.Oswald (2002). "Low cost reclamation using the Advanced Integrated Wastewater Pond Systems ® Technology and reverse osmosis." Water Science and Technology. 45:117-125.
- M.A. Zárate, T.J. Lundquist, I.X. Zubieta, A.Y. Ku, F.B. Green, and W.J. Oswald (2000). "Selenium and other toxic metals removal using the AIWPS® Technology," presented at The 1st IWA Latin American Conference on Waste Stabilization Ponds and Reuse, October 24-27, 2000, Cali, Colombia.
- Zárate, M.A., T.J. Lundquist, F.B. Green, A.R. Brent, A.Y. Ku, and W.J. Oswald (1999). "The application of the AIWPS Technology to chemically contaminated agricultural drainage water," presented at the Fourth IAWQ Waste Stabilization Ponds Specialist Conference Technology and the Environment, April 20-23, 1999, Marrakech, Morocco.

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Deborah Scanlon Wall





Ms. Deborah Scanlon Wall is a Senior Project Manager located in ERM's Walnut Creek, California office and has more than 15 years experience in the field of environmental consulting. Ms Scanlon Wall has conducted Phase I environmental assessments, compliance assessments, and asbestos services, and project management for industrial, commercial, and multi-family residential facilities located throughout the Unites States and areas of Mexico and Spain.

Ms. Scanlon Wall has conducted over 500 Phase I environmental assessments and has also managed environmental assessment portfolios ranging from 5 to 25 sites throughout the United States. Clients include industry, attorneys, healthcare providers, educational facilities, brokers, and developers.

Ms. Scanlon Wall has conducted and managed hazardous materials surveys at various facility types across the United States and in various areas of Mexico and Spain. Surveys included assessments for asbestos, lead-based paint, and other hazardous materials. Asbestos services conducted include demolition level and pre-acquisition surveys, abatement cost estimating, abatement management, preparation of Operations & Maintenance Programs, and General Awareness Training.

Ms. Scanlon Wall has conducted medical waste compliance assessments at numerous hospitals throughout California, assisting healthcare facilities with assessing current medical waste handling practices, compliance with the California Medical Waste Management Act, and assisting with pharmaceutical waste programs.

Ms. Scanlon Wall has conducted exit audits of biotechnology facilities, assisting facility tenants with site closure, including interaction with regulatory agencies, removal of hazardous materials, and overseeing required cleaning and permit closures.

Professional Affiliations & Registrations

- California D.O.S.H. Certified Asbestos Consultant #92-0273
- EPA AHERA Building Inspector, Management Planner, Contractor/Supervisor, and Project Designer certifications
- Nevada Certified Asbestos Consultant #IJPM1472
- Nevada Certified Environmental Manager #2202
- OSHA 40-hour Health and Safety HAZWOPER Training
- OSHA HAZWOPER Supervisor Training

Fields of Competence

- Phase I Environmental Site Assessments
- · Asbestos surveys and management
- Regulatory compliance

Education

 B.S., Biological Sciences, California Polytechnic University, Pomona, CA, 1989

Languages

English, native speaker

Key Industry Sectors

- Manufacturing
- Biotechnology
- Healthcare
- Real Estate, Redevelopment
- High Technology & Telecommunications
- · Commercial and Residential Properties
- · Educational Facilities



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Environmental Site Assessments

Commercial Nurseries, Northern California

Conducted Phase I and limited compliance assessments at several commercial nursery facilities in northern California. Conducted site visits, reviewed historical documents, analytical data, and regulatory agency records and prepared detailed reports, including compliance needs for each site.

Golf Courses, United States and Britain

Project Manager for a large multi-site Phase I assessment project during a merger of two golf course entities. Conducted and managed numerous Phase I assessments at various sites throughout the United States and Britain. Conducted site visits, reviewed historical documents, analytical data, and regulatory agency records and prepared detailed reports, including the need for Phase II subsurface investigations. Also assisted with management of the Phase I investigations.

Marine Terminals, Southern California

Conducted Phase I and limited compliance assessments at marine terminals in the San Pedro and Long Beach areas of southern California. Conducted site visits, reviewed historical documents, analytical data, and regulatory agency records and prepared detailed reports, including compliance needs for each site.

Steelscape, Richmond, CA

Conducted a Phase I assessment at a steel manufacturing facility in Richmond, California. Conducted site visits, reviewed historical documents, analytical data, and regulatory agency records and a prepared a detailed report, including information on known and potential soil and groundwater impacts.

Hospitals, United States

Project Manager for a major healthcare entity, conducted Phase I assessments at numerous hospital complexes throughout California, Louisiana, Missouri, Florida and other states during purchases and sales of facilities. Also conducted site visits at many of the facilities, and prepared detailed reports, including the need for Phase II subsurface investigations.

Steel Mill, Colorado

Conducted a Phase I assessment of a large steel mill in Colorado. The assessment included a site visit, review of

historical documents, analytical data, and regulatory agency records and preparation of a detailed report. The Phase I included a review and assessment of numerous Solid Waste Management Units on-site, identified by the local regulatory agencies.

Western Digital, Northern California

Conducted Phase I assessments at various semiconductor facilities in northern California. Conducted site visits, reviewed historical documents, analytical data, and regulatory agency records and prepared detailed reports.

Asbestos Services

Biotechnology Facilities, Western and Eastern United States

Project Manager for a biotechnology property owner with sites located along the western and eastern coasts of the United States. Managed and conducted asbestos surveys and asbestos regulation compliance during property purchases and renovations. Prepared Operations & Maintenance Programs, and managed asbestos abatement projects. Developed and conducted internal and external asbestos training programs, including asbestos awareness training for property managers that focused on compliance with applicable state and federal regulations.

Multi-Family Residential Complex, Northern California

Project Manager for asbestos surveys and abatement oversight at a 3,000-unit apartment complex, with activities conducted over a 2 ½ year time period. Services provided included conducting surveys prior to renovations, coordinating daily schedules of the abatement contractor and air monitoring staff for abatement in up to 80 apartment units per month.

El Arbol, Spain

Conducted asbestos surveys at grocery stores throughout Spain. Surveys were conducted during regular operating hours. Also conducted co-worker training during survey activities. Prepared reports detailing survey findings.

Steelscape, Richmond, CA

Managed asbestos surveys and abatement oversight at a steel manufacturing facility in Richmond, California. Surveys and abatement were conducted during site occupation and once the facility had been vacated.

MARCH 2012 DEBORAH SC ANLON WALL

University of Southern California, Los Angeles, CA Project Manager for a campus-wide asbestos assessment program. Managed and conducted asbestos surveys of classroom, laboratory, administration, and support buildings throughout the main and medical school campuses, and provided reports detailing survey results.

Western Digital, Northern California

Managed and conducted asbestos surveys of various semi-conductor facilities in northern California, and prepared reports detailing survey findings.

Medical Waste Compliance

Hospital Complexes, San Francisco, CA

Managed and assisted with hazardous materials, hazardous waste, and medical waste portions of an environmental impact report for a proposed hospital, which included assessment of various departments to be re-located from three current hospital campuses.

Hospital Complexes, Southern California

Conducted medical waste compliance projects on two major southern California hospitals, including assessing current medical waste handling practices, assisting with California Medical Waste Management Act compliance, assisting with a pharmaceutical waste program, and assisting legal counsel with threatened criminal enforcement.

MARCH 2012 DEBORAH SC ANLON WALL

Bailey Blosser





Ms. Bailey Blosser is a Staff III Scientist with over two years of experience in the environmental consulting industry. Ms. Blosser works closely with the Mergers and Acquisitions (M&A) and Contaminated Site Management (CSM) practices within ERM. Her experience includes conducting Phase I and Phase II Environmental Site Assessments, groundwater sampling and monitoring programs, and soil, soil vapor, and groundwater investigations for transportation, manufacturing, and other industrial clients. She has planned and conducted investigation activities at ANG sites, airports, and distribution and manufacturing sites in Northern California.

Ms. Blosser has conducted numerous Phase I environmental assessments which are complied from site visits, personnel interviews, research of various agency records and historical documents. She has expertise in review of aerial photos, topographic maps, Sanborn Fire Insurance Maps, and agency record search reports that have allowed her to complete Phase I reports for each site. Clients include industry, consultants, attorneys, brokers, developers, and governmental agencies.

Ms. Blosser has also participated in sample collection and testing of drinking water for major airlines at San Francisco International Airport and Oakland International Airport. Ms. Blosser has provided construction oversight and conducted other miscellaneous field work. Additional experience includes participation in an impact site assessment study for the California High-Speed Train project and participation in an Environmental Impact Report for the Central California Coastal Seismic Imaging Project.

Fields of Competence

- Phase I and Phase II Environmental Site Assessments
- Regulatory compliance
- Hazardous waste, soil, and groundwater investigations
- · Groundwater monitoring and remediation programs
- Drilling and sampling technologies
- Active and passive soil vapor sampling
- Data analysis
- Soil logging
- Construction oversight

Education

- BS, Environmental Science, University of California at Los Angeles, Los Angeles, CA 2008
- 40-hour Hazardous Waste Operations and Emergency Response training, August 6, 2009
- 8-Hour HAZWOPER Refresher, current

Languages

- English, native speaker
- · Spanish, secondary language

Key Industry Sectors

- Manufacturing
- Biotechnology
- Real Estate, Redevelopment
- Commercial and Residential Properties
- Construction and Engineering
- Government
- Transportation



Company Confidential, Pleasant Hill, California Assisted with site investigation activities involving a regional VOC groundwater plume in Pleasant Hill, CA. Multiple parties have contributed to the VOC groundwater plume, which extends beneath a residential neighborhood. Soil vapor and indoor air impacts have resulted in the residential neighborhood from the commingled VOC plume. Conducted soil vapor, indoor air, and groundwater sampling using helium shroud method for soil vapor, Summa canisters for indoor air, and passive diffusion samplers, low flow, and traditional techniques for groundwater.

California Air National Guard, Hayward, California Participated in site investigation activities involving soil impacted by TPH, VOCs, Lead, and PAHs for Air National Guard property. Responsibilities included the oversight of direct push drilling activities and the logging and collection of soil for lab analyses. Coordinated and conducted large-scale quarterly groundwater monitoring events. Organized sampling schedules and field activities. Trained new personnel to perform sampling. Groundwater sampling techniques included using bailers and peristaltic pumps. Assisted in the preparation of quarterly groundwater monitoring reports.

KB Homes, Northern California

Conducted Phase I Environmental Site Assessments (ESAs) on developed and undeveloped properties throughout Northern California.

California High Speed Train - San Francisco to San Jose Section and San Jose to Merced Section, California Conducted hazardous materials and environmental site assessments of a 50-mile north-south trending corridor proposed to be constructed in San Francisco, San Mateo, and Santa Clara Counties and a 125-mile east-west trending corridor proposed to be constructed in Santa Clara, Merced, and Madera Counties as part of the California High Speed Train Project. The project involved review, analysis and compilation of environmental information and multiple-day site reconnaissance's along the proposed corridor to observe site and surrounding areas. Managed staff, assigned project work, identified properties of potential environmental concern along the proposed corridor, and provided recommendations for additional investigation. Produced a comprehensive environmental report that identified areas of potential hazardous impact and provided recommendations for mitigation.

Benicia, California

Participated in site investigation activities involving TCE in groundwater at a warehouse facility in Benicia, California. Conducted groundwater sampling using bailers and passive diffusion bags for groundwater.

San Francisco International Airport, San Francisco, California

Oversaw field operation of mobile high-vacuum extraction system to recover LNAPL at active boarding areas of San Francisco International Airport for both the Airport Common and a major airline. Documented recovered LNAPL for reporting.

United Airlines Potable Water Testing, San Francisco, California

Participated in sample collection and testing of drinking water for a major airline at San Francisco International Airport.

Southwest Airlines Potable Water Testing, Oakland, California

Participated in sample collection and testing of drinking water for a major airline at Oakland International Airport.

Biotechnology Facilities, Northern California Conducted Phase I ESAs on numerous biotech facilities throughout Northern California including Cisco and Ethicon-Endo, a subsidiary of Johnson & Johnson.

Pasadera Golf and Country Clubs, Monterey, California Conducted a Phase I ESA for a 200-acre golf and country club in Monterey, California.

Gary Farrell Winery, Sonoma County, California Conducted a Phase I ESA and limited regulatory compliance review of the Gary Farrell Winery in Healdsburg, California.

BlackRidge Real Estate Group, Southern California Conducted multiple Phase I ESAs on developed properties throughout Southern California.

Baxa, Denver, Colorado

Conducted a Phase I ESA and limited regulatory compliance review of a medical device manufacturing facility located in Denver, Colorado. Conducted extensive site history research and communications with regulatory personnel.

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Burke Industries, San Jose, California

Conducted a Phase I ESA for a company that manufactures rubber flooring and rubber wall boards. The Phase I involved extensive historical land use research, regulatory agency review, and review and summarization of site investigation reports, feasibility studies, monitoring reports, and human health risk assessments due to known soil and groundwater contamination on site from a neighboring facility.

MASCO Corporation, Northern California

Conducted Phase I ESAs, tenant exit reviews, and limited regulatory compliance reviews of various building products storage warehouses, commercial buildings, and facilities throughout the Bay Area.

Company Confidential, Northern California

Conducted numerous Phase I ESAs on developed and undeveloped properties including China Basin, commercial properties, and agricultural land throughout Northern California.

Centennial Corridor, California Department of Transportation, Bakersfield & Kern County, California Conducted a hazardous materials and environmental site assessment for a 12-mile east-west trending corridor proposed to be constructed in Kern County to connect Interstate 5 with Highway 99 through the City of Bakersfield. Identified areas of potential hazardous material impact and provided recommendations for mitigation.

Turret Steel Industries, Northern California Conducted Phase I ESA and limited regulatory compliance review of a steel bar storage and cutting

warehouse in Dos Palos, California.

Sonoma County Water Agency and Sonoma Valley County Sanitation District, Northern California Conducted hazardous materials and environmental site assessments as part of the Sonoma County wide effort to replace existing sewer lines and sewer trunk lines throughout Sonoma, California. The project involved review, analysis and compilation of environmental information, interview with site personnel, and multipleday site reconnaissance's along the propose sewer replacement lines to observe site and surrounding areas. Identified properties of potential environmental concern along the existing sewer lines and produced a comprehensive environmental report that identified areas of potential hazardous impact and provided recommendations for mitigation. Follow-up work

included preparing the proposals, scopes of works, and budget estimates to the client for Phase II ESAs.

PG&E, Northern California

Conducted numerous Phase I and Limited Phase II ESAs on undeveloped properties throughout Northern California.

Central California Coastal Seismic Imaging Project, San Luis Obispo, California

Assisted in the preparation of an Environmental Impact Report (EIR) on behalf of PG&E for the California State Lands Commission. Responsibilities included preparing the existing conditions and regulatory settings in the EIR, using CEQA guidelines. Other tasks included preparing the Aesthetics, Hazards and Hazardous Materials, and Traffic and Transportation sections in the EIR.

Sirna, San Francisco, California

Performed decontamination oversight work for a biotech facility in San Francisco, California.

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